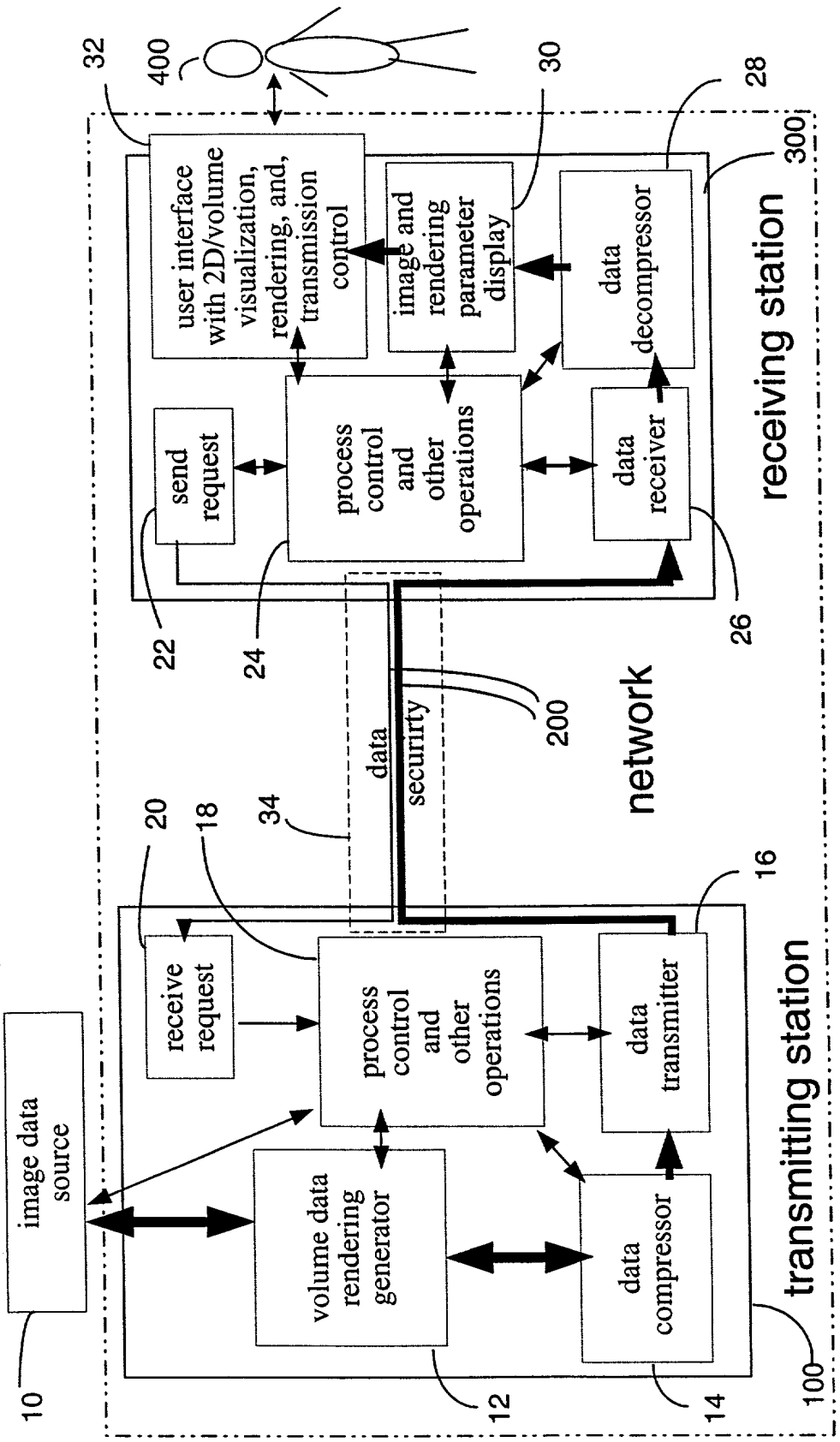
400
32
30
28
user interface with 2D/volume visualization, rendering, and, transmission control
image and rendering parameter display
data decompressor
300
receiving station
send request
process control and other operations
data receiver
22
24
26
200
network
data security
34
20
18
16
receive request
process control and other operations
data transmitter
image data source
volume data rendering generator
data compressor
transmitting station
10
12
14
100

Fig. 1

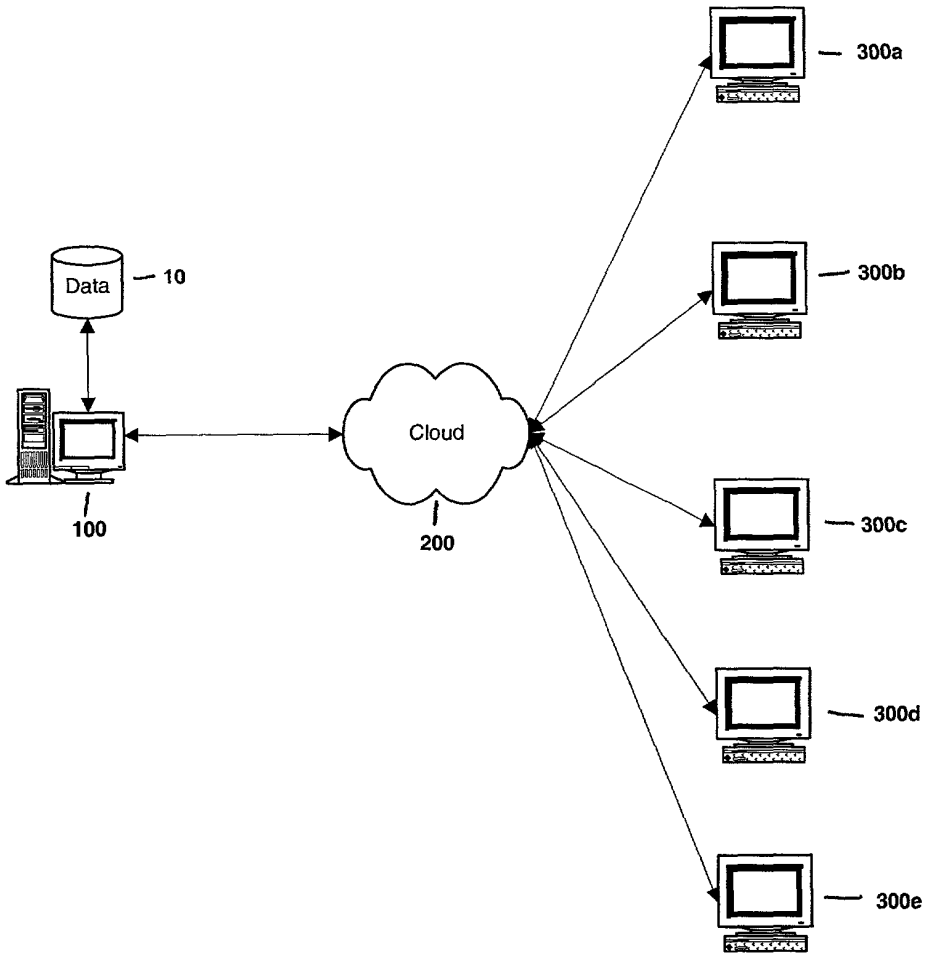

Fig. 2

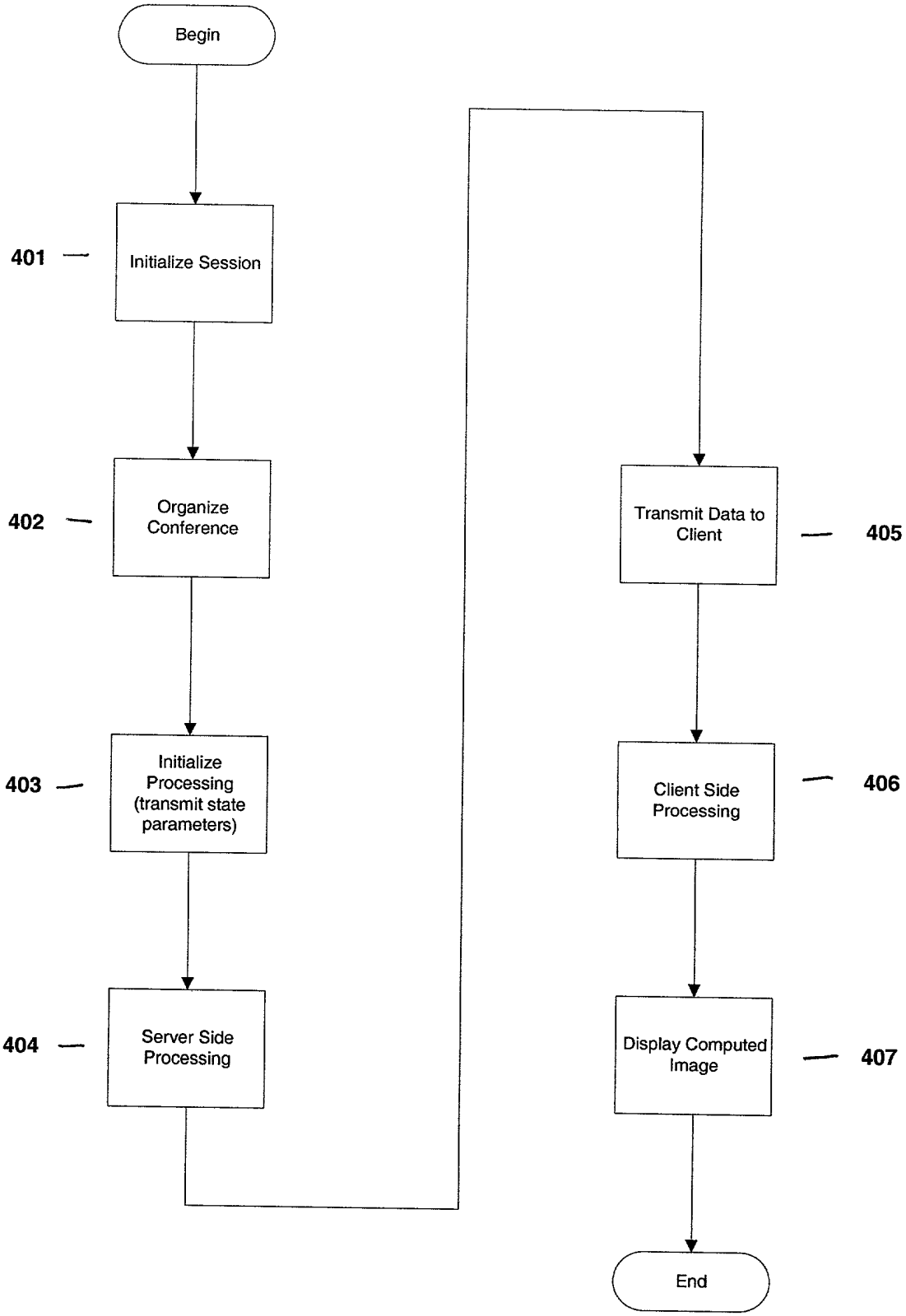
Begin
401
Initialize Session
402
Organize Conference
403
Initialize Processing (transmit state parameters)
404
Server Side Processing
Transmit Data to Client
405
Client Side Processing
406
Display Computed Image
407
End

Fig. 3

State Parameter	Description
1 communication parameters	
int dataLen;	length of data (in byte) to be transmitted
int Compressed;	non zero if the data is compressed
....	
2 data and display parameters	
int rowSize, columnSize;	The x and y dimension of the image being transmitted
int ImageRenderingMethodUsed;	0:Multislice; 1:Axial; 2:Sagittal; 3:Coronal; 4:Oblique; 5:Volume Render; 6:MIP; 7:Average; 8: MinIP; 9: Double Oblique;
int wwwl[2]	Window width and level for the image to be displayed
int pan_center[2]	The center of display field of view in the original dataset coordinate system: 0 nmax-1 for x,y. The default is the center of the full image.
int zoom_factor	The image's zoom-factor
float spacing	The pixel spacing
float rotationMatrix4x4[4][4]	Rotation matrix for current rendering.
int croppingBoundary3D[6]	Field of View, given in dataset coordinate system: xmin, xmax, ymin, ymax, zmin, zmax.
float center_ob_plane[3]	The center of oblique plane
float oblique_thickness	The thickness of the oblique plane
....	
3. collaboration parameters	
int conference_flag	Conference flag
int driver_ID	Driver's ID
structured annotation	Recording the cursor position and any annotation and text on the driver's computer.
Participant list	The list of designated participants
....	

Fig. 4

Title: On-Line Image Processing and Communication System
Inventor: Hui HU
Application No.: NEW
Docket No.: 49539200100

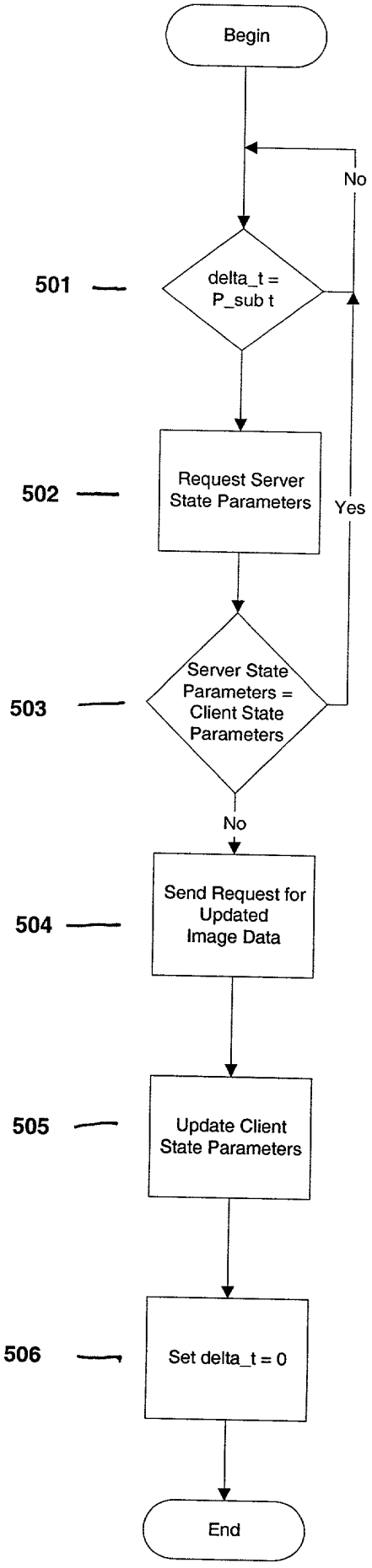

Fig. 5